

REMARKS

By the present amendment, Claims 1-29 have been canceled, and Claims 30-58 have been newly added. Claims 30-58 remain pending in the present application. Claims 30 and 45 are independent claims.

Applicant appreciates the courtesies extended to Applicant's representative during the personal interview held December 21, 2004. The present response summarizes the substance of the interview. At the interview Applicant's representative presented a proposed amendment for review to the Examiner. Proposed amended independent Claims 30 and 45 recited, respectively, an Internet search service system and method including a search service provider (SSP) level search subsystem and an in-site level search subsystem. The SSP level search subsystem was located on an SSP site. The SSP level search subsystem used web units as indexing objects and search results. Each web unit was an information entity with web unit index and categorization data for at least one web page of a web site. Each web page of each web unit was related to and integrated in the associated web unit according to a predetermined categorization criteria. The in-site level search subsystem was located in the web site. The SSP level search subsystem was communicatively linked to the in-site level search subsystem.

Applicants' representative presented arguments that any combination of the cited prior art, and particularly Tripp et al. (U.S. Patent No. 6,516,337) and Ryan et al. (U.S. Patent No. 6,421,675 B1), provide no motivation whatsoever to modify the teachings thereof to provide the Internet search service system and method set forth in the associated proposed claims.

The Examiner suggested further amending proposed independent Claims 30 and 45 to more clearly define web units as being a collection of web pages and associated metadata for categorizing the included pages, to functionally elaborate the in-site search subsystem, to functionally elaborate the communication between the SSP and in-site level search subsystems. The Examiner also suggested identifying specification support for means plus function language in the claims. A formal agreement as to the patentability of the claims was withheld by the Examiner pending a thorough review of the arguments and proposed amendment presented at the interview, a thorough review of this amendment, and a further update search.

Claims 5, 9, 10, 13, and 15 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Claim 10 is rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Tripp et al. (U.S. Patent No. 6,516,337). Claims 17, 18, and 20 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Ryan et al. (U.S. Patent No. 6,421,675 B1). Claims 1 and 21 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Perkowski (U.S. Patent No. 6,625,581 B1) in view of Porter (U.S. Patent No. 6,476,827 B1). Claims 3 and 23 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Perkowski in view of Porter and Ryan et al. Claims 4-6 and 24-26 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Perkowski in view of Porter and Lemay (Teach Yourself Web Publishing with HTML 4 in 14 Days, Second Professional Reference Edition, 1997). Claims 9 and 29 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Perkowski in view of Porter and Tripp et al. Claims 11-14 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tripp et al. in view of Lemay. Claims 15 and 16 are

rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tripp et al. in view of Lemay and Ryan et al. Claim 19 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ryan et al. in view of Tripp et al. Claims 2, 7, 8, 22, 27, and 28 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Perkowski in view of Porter and Williams, Jr. (U.S. Patent No. 6,108,686 B1). Applicant respectfully submits that the cancellation of Claims 1-29 renders these rejections moot.

Applicant has added new Claims 30-58 to more particularly define Applicant's claimed invention in view of the prior art of record. Applicant respectfully submits that the amendments to the claims are fully supported by the original disclosure, and introduce no new matter therewith. Applicant respectfully submits that that the newly added Claims 30-58 meet the specific requirements of 35 U.S.C. § 112, second paragraph.

Newly added independent Claim 30 recites an Internet search service system which includes a SSP level search subsystem and an in-site level search subsystem. The SSP level search subsystem is located on an SSP server for an SSP site. The SSP level search subsystem uses web units as indexing objects and search results. Each web unit is an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit. Each web page of each web unit is related to and integrated in the associated web unit according to a predetermined categorization criteria. The in-site level search subsystem is located on a web site server for the associated web site, and the in-site level search subsystem is configured to effect searches limited to within all web pages of the associated web site. The in-site level search subsystem is communicatively linked to the SSP level search subsystem,

and is configured to receive, carry, and execute an SSP level search query from the SSP level search subsystem.

Newly added independent Claim 45 recites an Internet search service method with steps of providing an SSP level search subsystem and providing an in-site level service subsystem. The SSP search service provider is located on an SSP server for an SSP site. The SSP level search subsystem uses web units as indexing objects and search results. Each web unit is an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit. Each web page of each web unit is related to and integrated in the associated web unit according to a predetermined categorization criteria. An in-site level search subsystem is provided and is located on a web site server for the associated web site. The in-site level search subsystem is configured to effect searches limited to all web pages of the associated web site. The in-site level search subsystem is communicatively linked to the SSP level search subsystem. The in-site level search subsystem is configured to receive, carry, and execute an SSP level search query from the SSP level search subsystem.

Applicant respectfully submits that each occurrence of means plus function language in the claims is considered to invoke interpretation based on 35 U.S.C. § 112, sixth paragraph. In Claim 32, the "self-submission means for submitting web unit index and categorization data for a predetermined web unit" is described on pages 19-21 of the present application. The "data organizer means for indexing and sorting web unit index and categorization data obtained by said self-submission means" is described on pages 22-24 of the present application. The "search

service means for obtaining web unit search results based on queries, narrowing down obtained web unit search results according to selected narrow down variables, and providing personalized service" is described on pages 24-26.

The claimed Internet search service system and method provides two levels of search systems for searchers to find information on the Internet and World Wide Web. Conventional search service systems are SSP centered search models, where all searches are conducted and stopped at an SSP server. There are some web sites that provide in-site search. But the two are not linked and do not work together. The claimed Internet search service system and method uses web unit as indexing object and search results at the SSP level to serve the purpose of finding relevant web destinations for searchers. They utilize in-site search means to help searchers find exact information at web site levels. They provide tools to connect two level searches and personalizes search.

At the SSP level, the purpose is to find relevant web destinations in the form of web units. Webmasters/site owners of web sites can submit web unit metadata (index) and select category locations (multi-directory) for web units of their web site. Self-submission can be done, but is not limited to, the use of downloadable submission software from the SSP server. The downloadable submission software has functions to monitor changes in remote web sites and to remind webmasters to update their submission data at the SSP server. The SSP detects the submission(s) and sorts the data, and then puts them into a database on the SSP server. When users type a query in the search box, the SSP search engine brings the matching web units to users. When users want to further narrow down the initial result, the SSP program provides

narrow down variables and based on user's selection generates a reduced search result list. When users click on the link of a search result, the users will leave the SSP server site and go to a web unit entry page on the remote web site.

The entry page provides the user with the ability to easily navigate through the web pages associated with the web unit, by indicating how many pages or slides are in the web unit, where the user is located within the web unit, etc. Users can save their visited web unit into a personal directory. The personal directory can be updated due to changes in either category structure in the SSP site or web units in remote web sites. The SSP can use software to analyze user's search pattern and create user profiles. The user profile can be used to suggest web units to users or other search improvement tips. A personal search agent can be set up to help users conduct further searches at the in-site level. A designated web unit can be used in the SSP server to let users post an unsolved search query. The users can provide feedback on web unit ranking and help to detect errors in web unit data.

At the in-site level, the purpose is to find exact information locations (web pages) within the web site or web unit. The SSP provides help on improving web site navigation structure and user feedback. A remote web site server can install an authoring tool and in-site search tool kit from the SSP. The authoring tool is used to make implementing metadata (new web page language) in web page coding easier. The search tool kit includes a web robot that understands the metadata in web page coding and can generate indexes for all the pages in the remote web site. The in-site index database is created by an in-side web robot. A search program (search engine) can conduct searches in the in-site index database. Therefore, the in-site search is

limited to the site wide scope. The SSP level search query can be sent to the in-site search engine via the communication linking method configured in the system (e.g., a protocol). The in-site search can be initiated either by the personal search agent or by a user. The agent can be used to carry search query(s) from the SSP level to the in-site search engine. The agent can conduct searches on all the web units from resulting lists at the SSP level. It can save a user a lot of time on finding exact information at all the web units that match queries at the SSP level. If a remote web site doesn't have in-site search tools from the SSP, a search agent can become a web robot to index the web pages in the web site.

With respect to the phrases web unit, web unit builder, and/or webmaster (canceled Claims 5, 9, 10, 13, 15), usually a web site is a multi-function and multi-purpose entity, while a web page is part of a single function/purpose component. For information indexing and cataloging purpose neither of them is a good candidate. A web unit is an entity between them and will serve the indexing and cataloging purpose well. URL is not the way to define a web unit. URL is used for pointing out where the web pages are by giving a unique path for them. The URLs for web units in this application point to the entry page of a web unit. The link structure from the entry page shows how the web unit is organized.

HTML is basically a presentation language for human beings to understand. Therefore HTML code itself isn't very helpful to define a web unit. RDF, which was developed by W3C at the time the invention was made, will be more powerful to define relationship between different parts of a web site. When RDF and XML are not widely implemented, human judgment must be used to define a web unit.

In most cases it is very intuitive to find out different functional components in a web site. How to define a web unit is based on its functionality, the amount of contents in it, the web site structure, and its targeted users. The web unit is also a flexible entity for indexing and cataloging purposes. If a web site is small enough, it can be treated as a web unit. For example, a web unit can be a web site with only several pages describing a small business. A single web page that contains self-contained content in it can also be a web unit. For example, a research paper posted by a scientist.

A webmaster is usually the person in charge of the web site's operation and daily maintenance. The web unit builder is the people who actually composed the content. For example, a scientist that wrote the paper that is posted in a web site is the web unit builder. For indexing and cataloging purpose at the two-level search system, both the web unit builder and the webmaster can play a role.

Tripp et al. describes a search engine that utilizes a bottom-up approach to index the content of a network instead of relying on a top-down approach as used by conventional search engines. Tripp et al. is a worldwide search system using a bottom-up indexing approach. Tripp et al. is targeted to totally eliminate spider (web robot) in indexing process. The brochures used by Tripp et al. must be stored in the file directory of the remote site for determining the relevancy of the information in the brochure. In Tripp et al.'s invention, the metadata is assembled in brochures in web brochures, which are then submitted to the central search server. In the claimed Internet search service system and/or method, the authoring tool is for web unit builders and or webmasters to create metadata for the in-site search means. At the SSP level

search, web unit builders and/or webmasters use self-submission to create indices and categorization information for web units. At the in-site search level, they use an authoring tool to write or rewrite their web pages, so that the in-site search tool kit can use the metadata and other information to create in-site search database. Both the functions and usage environment for the authoring tool are not same as described in Tripp et al.

In the claimed Internet search service system and/or method, input data for a web site includes web unit index and multi-directory location. The inputting process has no effect on the source site in file structure and site content. In Tripp et al.'s invention the brochure contains metadata about the source site content, but no detailed categorization structure in the central site. The brochures in Tripp et al.'s invention must be stored in the file directory of the remote site for determining the relevancy of the information in the brochure. Tripp et al.'s invention is a one level search model as are conventional search engines.

Tripp et al. nowhere teaches or reasonably suggests an Internet search service system and/or method that provides an SSP level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit, each web page of each web unit being related to and integrated in the associated web unit according to a predetermined categorization criteria; and provides an in-site level search subsystem located on a web site server for the associated web site, the in-site level search subsystem configured to effect searches limited to all web pages of the associated web site; communicatively linking the in-site

level search subsystem to the SSP level search subsystem; and configuring the in-site level search subsystem to receive, carry, and execute an SSP level search query from the SSP level search subsystem, as Claims 30-58 require.

Ryan et al. describes a method of updating an internet search engine database with the results of a users selection of specific web page listings from the general web page listing provided to the user as a result of his initial keyword search entry. Ryan is a search ranking method that determines popular web pages associated with certain keywords.

There is a fundamental difference between Ryan et al.'s invention and the claimed Internet search service system and/or method. In Ryan et al.'s invention, a web page developer associates his/her web page with certain keywords. In the claimed Internet search service system and/or method, a classification schema with branches and nodes representing different categories is established for web units. In the claimed Internet search service system and/or method, a web unit builder and/or webmaster can define a relationship among web units, keywords, and categories.

Ryan et al. nowhere teaches or reasonably suggests an Internet search service system and/or method that provides an SSP level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit, each web page of each web unit being related to and integrated in the associated web unit according to a predetermined categorization criteria; and provides an in-site level search subsystem located on a web site server for the associated web site, the in-site level search subsystem configured to effect

searches limited to all web pages of the associated web site; communicatively linking the in-site level search subsystem to the SSP level search subsystem; and configuring the in-site level search subsystem to receive, carry, and execute an SSP level search query from the SSP level search subsystem, as Claims 30-58 require.

Perkowski describes a method of and system for delivering consumer product related information to consumers over the Internet. Perkowski uses an embedded search agent (Applet) in consumer product information entities, UPN/URL database and web pages, to let consumers perform a single mouse-clicking to retrieve interested product information. Perkowski's tool only serves the purpose of retrieving product information interested to users. Perkowski's invention only provides a management tool to manufacturer/retailer to construct and maintain a limited version UPN/URL database.

Perkowski nowhere teaches or reasonably suggests an Internet search service system and/or method that provides an SSP level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit, each web page of each web unit being related to and integrated in the associated web unit according to a predetermined categorization criteria; and provides an in-site level search subsystem located on a web site server for the associated web site, the in-site level search subsystem configured to effect searches limited to all web pages of the associated web site; communicatively linking the in-site level search subsystem to the SSP level search subsystem; and configuring the in-site level

search subsystem to receive, carry, and execute an SSP level search query from the SSP level search subsystem, as Claims 30-58 require.

Porter describes a state icon having a plurality of manifestations corresponding to a plurality of states associated with saving a copy of a current information page being browsed is automatically displayed for a user. Porter is an advanced personal bookmark system (scrapbook) to store and manage visited web pages. Porter's search scripts are used for search saved web pages in the designated repository through a scrapbook interface. In the claimed Internet search service system and/or method, a search agent can search both saved web units in a directory and newly found web units from a new search result list. The claimed search is accomplished by carrying a user's search command/query to in-site level and communicating with in-site search means. A personal search can initiate in-site search engine's action or behave as a search robot at the destination site. A search agent can conduct a search beyond the user's initial search result at the SSP level.

Porter nowhere teaches or reasonably suggests an Internet search service system and/or method that provides an SSP level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit, each web page of each web unit being related to and integrated in the associated web unit according to a predetermined categorization criteria; and provides an in-site level search subsystem located on a web site server for the associated web site, the in-site level search subsystem configured to effect

searches limited to all web pages of the associated web site; communicatively linking the in-site level search subsystem to the SSP level search subsystem; and configuring the in-site level search subsystem to receive, carry, and execute an SSP level search query from the SSP level search subsystem, as Claims 30-58 require.

Lemay describes web publishing with HTML 4. Lemay nowhere teaches or reasonably suggests an Internet search service system and/or method that provides an SSP level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit, each web page of each web unit being related to and integrated in the associated web unit according to a predetermined categorization criteria; and provides an in-site level search subsystem located on a web site server for the associated web site, the in-site level search subsystem configured to effect searches limited to all web pages of the associated web site; communicatively linking the in-site level search subsystem to the SSP level search subsystem; and configuring the in-site level search subsystem to receive, carry, and execute an SSP level search query from the SSP level search subsystem, as Claims 30-58 require.

Williams, Jr. describes a subject-specific information retrieval and viewing system that enables multiple users of a local computer system to access information stored remotely on a wide area network. Williams, Jr. is an agent based online search system, but the system has a serious restriction, i.e., it cannot work well with any remote content site. The database structure

of the remote content sites must be known to the system user (col. 3, lines 28-31), therefore Williams, Jr. does not have the scalability to be used in the scope of the Internet.

In Williams, Jr.'s invention, the system/agent is used to retrieve and view the information relating to a particular and predefined subject area. Even though Williams, Jr.'s invention may improve the search efficiency, Williams, Jr.'s invention has nothing to do with a directory designed in the claimed Internet search service system and/or method.

Williams, Jr. nowhere teaches or reasonably suggests an Internet search service system and/or method that provides an SSP level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit, each web page of each web unit being related to and integrated in the associated web unit according to a predetermined categorization criteria; and provides an in-site level search subsystem located on a web site server for the associated web site, the in-site level search subsystem configured to effect searches limited to all web pages of the associated web site; communicatively linking the in-site level search subsystem to the SSP level search subsystem; and configuring the in-site level search subsystem to receive, carry, and execute an SSP level search query from the SSP level search subsystem, as Claims 30-58 require.

It is well known that all of the claimed limitations must be taught or suggested by the prior art, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references

or to combine the reference teachings (see *In re Vaek*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Applicant respectfully submits that Tripp et al., Ryan et al., Perkowski, Porter, Lemay, Williams, Jr., or any combination thereof, provides no motivation whatsoever to modify the teachings thereof to provide an Internet search service system including a search service provider (SSP) level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity collection of at least one web page of a web site and web unit index and categorization metadata for categorizing each web page of the web unit, each web page of each web unit being related to and integrated in the associated web unit according to a predetermined categorization criteria; and an in-site level search subsystem located on a web site server for the associated web site, said in-site level search subsystem configured to effect searches limited to all web pages of the associated web site; wherein the in-site level search subsystem is communicatively linked to said SSP level search subsystem, and is configured to receive, carry, and execute an SSP level search query from the SSP level search subsystem, as newly added Claims 30-44 require.

Applicant also respectfully submits that Tripp et al., Ryan et al., Perkowski, Porter, Lemay, Williams, Jr., or any combination thereof, provides no motivation whatsoever to modify the teachings thereof to provide an Internet search service method with steps of providing an SSP level search subsystem located on an SSP server for an SSP site, the SSP level search subsystem using web units as indexing objects and search results, each web unit being an information entity

Serial No.: 09/828,931
Art Unit: 2144

Docket No. 18961.00
Customer No. 37833

collection of at least one web page of a web site and web unit index and categorization metadata
for categorizing each web page of the web unit, each web page of each web unit being related to
and integrated in the associated web unit according to a predetermined categorization criteria;
and providing an in-site level search subsystem located on a web site server for the associated
web site, said in-site level search subsystem configured to effect searches limited to all web
pages of the associated web site; communicatively linking the in-site level search subsystem to
the SSP level search subsystem; and configuring the in-site level search subsystem to receive,
carry, and execute an SSP level search query from the SSP level search subsystem, as newly
added Claims 45-58 require.

For the foregoing reasons, Applicant respectfully submits that the present application is in
condition for allowance. If such is not the case, the Examiner is requested to kindly contact the
undersigned in an effort to satisfactorily conclude the prosecution of this application.

Respectfully submitted,



Thomas C. Schoeffler
Registration No. 43,385
(703) 486-1000